

WIM Blue/ Green Team (BGT) Domain Requirements Input Matrix							
(See Comments Section at the end of document for complete descriptions of fields)							
Identifier	Source	WARSIM SRD Traceability	Requirement Text	Test Method	IOC	FOC	Remarks
6000	1.0	1.2	Support the training of unit commanders and their intelligence staff components.		X		
6005	1.1	1.2	Support training from battalion through Echelons Above Corps (EAC).		X		
6010	1.2	3.2	Support training events to include Joint Task Forces training events.		X		
6015	1.4	1.2	Support training events to include schooling and educational institutions.		X		
6020	2.0	1.2	Provide collection management training.		X		
6025	2.1	1.2	Provide collection management support.		X		
6030	3.0	1.2	Support intelligence requirements of large scale exercises.		X		
6035	3.1	1.2	Use Ulchi Focus Lens as a demonstration of a large scale exercise.		X		
6040	WARSIM	1.2	Use Corps Warfighter as a demonstration of a large scale exercise.		X		
6045	4.0	1.2	Support training events to include only intelligence personnel.		X		
6050	4.1	1.2	Provide capability to use intelligence unit TO&E equipment.		X		
6055	4.2	1.2	Use 513th MI BDE's Bold Knight exercise as a demonstration for an intelligence training scenario.		X		
6060	HLA	1.2	Use Joint Precision Strike Demonstration (JPSD) 96 exercise as a demonstration for an intelligence training scenario, in regards to C4I linkage.			X	
6065	5.0	1.2	Provide an intelligence training environment.		X		
6070	WARSIM	3.2	Provide a training environment consisting of simulation control and execution.		X		
6075	WARSIM	3.2	Provide a training environment consisting of simulation system management		X		
6080	WARSIM	3.2	Provide a training environment consisting of simulation data retrieval and storage.		X		

Identifier	Source	WARSIM SRD Traceability	Requirement Text	Test Method	IOC	FOC	Remarks
6085	5.1	3.3.4	Environment shall include targets and collection assets across the operational continuum.		X		
6090	6.0	3.2.d.	Environment shall include real world sensor simulation models of both joint and combined forces.		X		
6095	7.0	3.2.a.	Simulation shall interoperate with simulators, live instrumented ranges, and vehicles.		X		
6100	7.1	3.2.a.	Simulation shall interoperate with IEWTPT.		X		IEWTPT: Intelligence and Electronic Warfare Tactical Proficiency Trainer
6105	USAIC&FH		Simulation shall provide scenario generation capability to the level of resolution required by IEWTPT.			X	This requirement probably means more data being required in WIM objects than WARSIM objects currently provide.
6110	7.2	3.2	Simulation shall allow for expansion of training by adding components required for joint and combined forces training.		X		
6115	8.0	3.3.1	Simulation shall portray effects of ground, air, ocean and space intelligence sources.		X		
6120	8.1	3.3	Intelligence sources shall have the capability to perform typical collection and reporting operations.		X		
6125	8.2	3.3.1	Joint and combined intelligence collection and reporting shall affect Army collection and reporting.		X		
6130	9.0	3.3.1	Actions of other services that affect planning and execution of Army operations shall be modeled.		X		
6135	9.1	3.3.1	Air reconnaissance shall be modeled.		X		
6140	9.2	3.3.1	Actions to be modeled shall include collection assets that have a critical effect on intelligence planning and execution.		X		
6145	10.0	3.3.2	The simulation shall portray national assets products.		X		
6150	10.1	3.3.2	National assets products shall include national sources, collection, and reporting systems.		X		
6155	10.2	3.3.2	National assets shall be modeled at each appropriate echelon.		X		

Identifier	Source	WARSIM SRD Traceability	Requirement Text	Test Method	IOC	FOC	Remarks
6160	10.3	3.3.2	HUMINT, IMINT, SIGINT, and MASINT reports and data shall be modeled.		X		HUMINT: Human Intelligence, SIGINT: Signals Intelligence, IMINT: Imagery Intelligence, MASINT: Measurement and Signatures Intelligence
6165	11.0	3.3.3	The products from Allied (BLUFOR) and Neutral (Gray/Clandestine) Forces assets shall be modeled.		X	X	BLUEFOR: IOC Requirement, Gray/Clandestine: FOC Requirement
6170	11.1	3.3.3	Allied assets shall be modeled at each appropriate echelon.		X		
6175	11.2	3.3.3	Allied assets products shall include IMINT, HUMINT and SIGINT.		X		
6180	11.3	3.3.3	Allied assets shall include commercial satellite collection systems.		X		
6185	11.4	3.3.3	Allied assets products shall include commercial satellite products.		X		
6190	12.0	3.4.2	The simulation shall portray both entity and aggregate levels of detail.		X		
6195	12.1	3.4.2	The level of detail shall include portrayal of individual entity signatures.		X		
6200	12.2	3.4.2	The level of detail shall include portrayal of aggregate units signatures.		X		
6205	12.3	3.4.2	Aggregations of units shall include engagements, battles, and campaigns.		X		
6210	12.4	3.4.2	The simulation shall have the capability to doctrinally aggregate/deaggregate intelligence unit structures.		X		
6215	USAIC&FH		Aggregations/deaggregation shall support communications networks and emission signatures as well as units (e.g. an aggregate picture of the background noise on the battlefield).			X	
6220	12.5	3.2	Individual and aggregate unit signatures shall include MTI, FTI, SAR and other signatures.		X		MTI: Moving Target Indicator, FTI: Fixed Target Indicator, SAR: Synthetic Aperature Radar
6225	13.0	3.4.2	Both entity and aggregate unit performance data shall be modeled.		X		
6230	13.1	3.4.2	Performance data shall be modeled at each appropriate level of classification.		X		

Identifier	Source	WARSIM SRD Traceability	Requirement Text	Test Method	IOC	FOC	Remarks
6235	14.0	3.4.5	The simulation shall accommodate multi-echelon exercises.		X		
6240	14.1	3.7.3	Multi-echelon exercises shall include three to five echelons of command for a large exercise.		X		
6245	14.2	3.7.3	Multi-echelon exercises shall include one to two echelons in a small or seminar exercise.		X		
6250	15.0	3.2.a	The simulation shall interact with intelligence staffs using actual mission and C4I equipment.		X		
6255	15.1	3.2.a	Interfaces to mission and C4I equipment shall be such that the simulation is "transparent" to the training staff.		X		
6260	15.2	3.3.5	Staff interaction with mission and C4I equipment includes both input of orders and information in actual input formats and output of reports and information in actual report formats.		X		
6265	15.3	3.2.a	The simulation shall interoperate seamlessly with all mission and C4I equipment required for the exercise at once.		X		
6270	15.4	3.3	The simulation shall interoperate with the JCMT.		X		JCMT: Joint Collection Modeling Tools
6275	15.5	3.2.b	Computer systems, networks, and databases shall utilize distributed computing techniques.		X		
6280	16.0	3.4	The simulation shall receive and present its information at the level of detail appropriate to each training unit.		X		
6285	17.0	3.4	The simulation shall accurately portray the impact of environment on units.		X		
6290	17.1	3.4	The environment shall include the terrain and weather elements and databases generated by WARSIM 2000.		X		
6295	17.2	3.4.6	The impact of environment on units shall include, but not be limited to, electronic signatures, communication, movement, effective range, LOB, LOS, EO/IR, and cognitive processes.			X	LOB: Line of Bearing, LOS: Line of Sight, EO/IR: Electro-optic/Infrared
6300	17.3	3.4	Updates of weather or terrain information from WARSIM 2000 during an exercise shall be reflected in the intelligence simulation modeling.		X		
6305	19.0	3.4.11	Communication within the simulation shall be degraded by environmental conditions, extended ranges, equipment malfunctions, network overload based on combat activities and communications equipment destruction.		X		

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6310	19.1	3.4.11	The simulation shall account for the effects of both hostile actions and fratricide.		X		
6315	20.0	1.2	WIM shall be capable of interaction with other simulations and systems through the HLA RTI.			X	
6320	20.1	3.5.2	Interactions shall include integrating WIM with WARSIM 2000 and each of its modules.		X		
6325	20.1.1	3.2	Simulation shall support training at all of the fielded WARSIM 2000 regional fixed sites.		X		
6330	20.2	3.5.2	Interactions shall include simulation to simulation interaction (i.e. WARSIM to WARSIM)		X		
6335	20.3	3.5.2	Interactions shall include interfacing to simulations.		X		
6340	20.4	3.5.2	Interactions shall include interfacing to simulators.		X		
6345	20.5	3.2.a	Interactions shall include interfacing to live instrumented ranges, vehicles or equipment.		X		
6350	20.6	3.2.a	Interactions shall include interfacing to actual mission and C4I equipment.		X		
6355	20.7	3.4.11	Interactions shall include the capability to provide synchronization of communications degradation levels.		X		
6360	20.8	1.2	Architecture shall support the Technical Architecture Framework for Information Management (TAFIM).		X		
6365	21.0	3.4.12	The simulation shall portray the effects of electronic and information warfare on the simulated units' ability to carry out missions on the battlefield.		X		
6370	21.1	3.4.12	Simulated units shall include friendly, opposing and grey/ clandestine forces.		X	X	Friendly/opposing: IOC, gray/ clandestine: FOC
6375	21.2	3.4.12	Electronic and information warfare shall include effects on units' automated systems, communications, radar and intelligence operations.		X		
6380	22.0	3.4.13	The effects of precision munitions against simulation targets shall be modeled in the form of decreased capabilities and/or characteristics.		X		
6385	23.0	3.4.13	Changes to a units' capabilities and/or characteristics shall affect intelligence collection throughout the simulation.		X		
6390	23.1	3.4.13	Destroyed and immobilized units shall remain on battlefield for intelligence collection purposes.		X		

Identifier	Source	WARSIM SRD Traceability	Requirement Text	Test Method	IOC	FOC	Remarks
6395	23.2	3.4.13	Destroyed, immobilized or jettisoned equipment or systems within a unit shall remain on battlefield for intelligence collection purposes.		X		
6400	23.3	3.4.13	Unit characteristics shall include radar emissions and changes in terrain.		X		
6405	23.4	3.4.13	Supplies or equipment gained/lost by a unit during an exercise shall change that unit's capabilities and/or characteristics.		X		
6410	24.0	3.5	Simulation shall use flexible and responsive communications gateways between elements and to remote locations involved in training exercise.		X		
6415	24.1	3.2.c	Simulation shall use secure terrestrial and satellite media for transmitting appropriate voice, data, facsimile, imagery, and live video between simulation elements.		X		
6420	25.0	3.5.1	Training support personnel shall be able to make changes during an exercise with minimal disruption to the exercise.		X		
6425	25.1	3.5.1	Training personnel shall be able to change scenarios, input parameters, rules, message formats, network structures and etc.		X		
6430	25.2	3.5.1	The scenario shall have modification ability during simulation exercise.		X		
6435	26.0	3.5.2	Simulation shall link with other simulators.		X		
6440	26.1	3.5.2	Simulation shall operate with Joint Surveillance Target Attack Radar (JSTARS) System Simulator (JSS) and High Resolution System Stimulator (HRSS).		X		
6445	26.2	3.5.2	Simulation shall operate with IEWTPT.			X	
6450	26.3	3.6	Simulation shall operate with DIS/HLA-compliant prototype simulations.		X		
6455	26.4	3.5.2	Simulation shall operate with instrument ranges.		X		
6460	27.0	3.5.2	System operators can allow units of simulators to enter or leave the simulation environment without disrupting the training exercise.		X		

Identifier	Source	WARSIM SRD Traceability	Requirement Text	Test Method	IOC	FOC	Remarks
6465	28.0	3.5.3	The simulation shall provide intelligence unit trainees the ability to use organizational systems for all incoming and outgoing communications and data transfer with the simulation.		X		
6470	29.0	3.5.3	Simulation shall integrate with each component of the organization systems at all echelons.		X		
6475	29.1	3.5.3	Simulation shall integrate with simulated UAVs.		X		UAV: Unmanned Aerial Vehicle
6480	30.0	3.5.3	Simulation shall send and receive information in the format or display mode via media or means employed the simulated system.		X		
6485	30.1	3.5.3	UAV output shall be in video form.		X		
6490	30.2	3.5.3	Messages from a SIGINT collection shall be electronic data transmission, RF, voice and ect.		X		
6495	31.0	3.5.4	Provide several types of secure terrestrial and satellite communications support for training exercise .		X		
6500	32.0	3.5.5	Simulation shall use, manipulate, input data to, and extract data from a variety of databases .		X		
6505	32.1	3.5.5	Databases shall include Army organizational system databases and other US intelligence community used by the Army intelligence units.		X		
6510	32.2	3.5.5	Databases shall include DODIIS databases and other Allied intelligence community databases used by the Army intelligence units.			X	
6515	32.3	3.5.5	Databases shall include standard army management information systems using standard Commercial or Government Off-the-Shelf database management systems.			X	
6520	33.0	3.5.5	Data manipulation by simulation shall include approved means of changing classification.		X		
6525	33.1	3.5.5	Such as, if fixed facilities information is loaded into the database, but the exercise does not want to use real BE numbers, then a quick way of changing to generic unclassified data must be provided.		X		
6530	34.0	3.5.6	Simulation shall archive data to meet intelligence unit's specific training objectives.		X		
6535	34.1	3.5.6	Provide data for the scenario databases.		X		

Identifier	Source	WARSIM SRD Traceability	Requirement Text	Test Method	IOC	FOC	Remarks
6540	34.2	3.5.6	Provide information to support the AAR requested by the unit, the Center for Army Lessons Learned, and the Battle Command Training Program (BCTP).		X		
6545	35.0	3.5.6	Data shall be archived with respect to time in order to facilitate examination of the dynamics of intelligence collection activities during the battle.		X		
6550	36.0	3.5.6	Simulation shall archive data needed for verification, validation, test, and evaluation.		X		
6555	37.0	3.5.7.1	Operate and produce reports in an unclassified mode.		X		
6560	38.0	3.5.7.1	Transmit classified data over the distributed network.		X		
6565	39.0	3.5.7.1	Use classified data as a part of the model parameters in a classified database, media storage, and purging of classified data from systems.		X		
6570	40.0	3.5.7.1	Deny unauthorized users.		X		
6575	41.0	3.5.7.1	Required classification levels shall include unclassified, secret, and top secret-sensitive compartmented information (TS/SCI) for intelligence models and reports.		X		
6580	42.0	3.5.8	Provide intelligence unique tools to facilitate AAR for intelligence personnel.		X		
6585	42.1	3.5.8	Tools shall include, but are not limited to, displays of intelligence collection coverage at any point in the simulation.			X	
6590	42.2	3.5.8	Provide the ability to display the battlefield as sensed by the modeled collection systems compared to the ground truth.		X		
6595	42.3	3.5.8	Provide displays of errors or mistakes induced by the system.		X		
6600	44.0	3.5.1	Permit modification of sensor parameters to allow for technical advancement.		X		
6605	45.0	3.3.4	Provide intelligence collection against and by OPFOR.		X		
6610	45.1	3.3.3	Provide intelligence collection against and by gray organization's apparatus.		X		
6615	45.2	3.3.3	Provide intelligence collection against and by gray clandestine and/or covert organization's apparatus.			X	
6620	46.0	3.3.1	Provide for simulation of political, economic and infrastructure information.			X	

Identifier	Source	WARSIM SRD Traceability	Requirement Text	Test Method	IOC	FOC	Remarks
6625	47.0	3.3	Provide intelligence simulation support to Military Operations Other Than War (MOOTW).			X	
6630	47.1	3.3	Support disaster relief, military assistance to civil disturbance, non combatant evacuation, peacekeeping/peacemaking, riot control, stabilization, counter-drug and counter-terrorism operations.			X	
6635	48.0	3.2.h	Prepare and conduct both daily and end of exercise AAR's for the training event adequate for the intelligence training community.		X		
6640	USFK		Facility Degredation: Fixed Targets shall suffer damage with fine enough detail to provide realistic intelligence for targeting/ restrike		X		
6645	USFK		Damage Signature: Wreckage must be left behind for portrayal of damage signatures for both facilities and units		X		
6650	USFK		Impact on OPFOR operations: Damage to OPFOR logistical and C2 infrastructure does not translate into OPFOR effectiveness. Thus, there is little incentive to apply maneuver warfare principles.		X		
6655	USFK		Some impact on OPFOR OPTEMPO is desired when damage to such infrastructure reaches pre-programmed thresholds.		X		
6660	USFK		C2 Warfare: Must have effective implementation of C2W campaign.		X		C2W: Command and Control Warfare
6665	USFK		Underground facilities (UGF): UGFs, hardened artillery sites and tunnels must be modeled.		X		
6670	USFK		MASINT threats: MASINT must be modeled to include IR/thermal signature, audial signature, seismic signature, and magnetic signature (esp. ballistic missile launchers prior to launch)		X		
6675	USFK		Simulation catalog on WWW: Have exercise/ confederation lessons learned and suggested workarounds posted on MILNET/SIPRNET			X	
6680	USFK		Databases: Rapid database build, quality control, data traceability required.		X		
6685	USFK		Map display: Comparison between perceived/ ground truth required.		X		

Identifier	Source	WARSIM SRD Traceability	Requirement Text	Test Method	IOC	FOC	Remarks
6690	USFK		Simulation tasking: Collection managers should be able o task assets using real-world H/W, formats, procedures and processors.		X		
6695	USFK		Reports: Reports from the simulation should come over the same (tasking) processors that real-world uses.		X		
6700	USFK		Maps: Require Datum on UTM map displays (i.e. WGS-84)		X		UTM: Universal Transverse Mercator
6705	FDB		System shall have firewall to restrict access to database and system functions.		X		
6710	FDB		System shall interface to FDB's document repository server.			X	
6715	FDB		System shall use WRDFD mission space.		X		
6720	FDB		Interface to FDB shall be via Data Interchange Format (DIF).			X	
6725	FDB		I/F to FDB data shall be HTML and Java compliant.			X	
6730	FDB		System shall require password access.		X		
6735	MRCI		System shall support usage of real-world databases (i.e. TO&E, CSSCS).		X		
6740	MRCI		System shall support faster than real time I/F to real-world C4I systems.		X		
6745	MRCI		Sytem shall be capable of providing reports in ABCS and CCSIL message formats.		X		
6750	HLA		System shall be capable of using CMMS, JCMMS, and DIMSM for mission space.		X		
6755	USAIC&FH		System must model real-world mistakes and human errors.		X		
6760	USAIC&FH		System must model units to the entity/ platform level.		X		
6765	USAIC&FH		System must be capable of handling 500-700K entities.			X	
6770	USAIC&FH		System must be capable of driving IEWTPT simulations.			X	
6775	CIO		System must be capable of passing imagery to real world tactical communications systems and networks.			X	
6780	CIO		System must be capable of filtering INTEL data based upon area, quality, timeliness, and sensor type.		X		
6785	CIO		System must have a database search engine.		X		
6790	CIO		System shall be capable of marking M&S reports to distinguish them from actual C4I INTEL information.		X		
6795	CIO		System shall allow for modification of imagery to meet user needs.			X	

Identifier	Source	WARSIM SRD Traceability	Requirement Text	Test Method	IOC	FOC	Remarks
6800	CIO		IMINT shall require an appropriate network bandwidth to pass information.			X	
6805	DIS FG/C3I		The system shall incorporate a method to identify country and organization responsible for entity behavior.			X	
6810	DIS FG/C3I		The system shall incorporate a method to identify a unit's organization (e.g. part of 111th MI Bde).		X		
6815	DIS FG/C3I		The system shall incorporate a method to identify placement of an entity in context of C2 subordination.		X		
6820	DIS FG/C3I		The system shall allow for dynamically changing country, organization, and placement within C2 subordination of units during and exercise.			X	
6825	DIS FG/C3I		The system shall use standardized tactical datalink messages.		X		
6830	DIS FG/C3I		The system shall allow for the intercept and exploitation of communications between virtual and live units.			X	
6835	DIS FG/C3I		The system shall allow for the disruption and manipulation of communications between live and virtual units.			X	
6840	DIS FG/C3I		IPB shall include C2 organizational structures of OPFOR, BLUFOR, and Gray (clandestine) forces.		X	X	OPFOR and BLUFOR are IOC requirements, Gray, Orange, Clandestine, Neutral, etc. is an FOC requirement.
6845	DIS FG/C3I		System shall represent EM characteristics of environment including reflectivity, IR, thermal, magnetic.		X		
6850	DIS FG/C3I		EM characterization on the battlefield shall also include the effect of signature groupings for aggregate units.			X	
6855	DIS FG/C3I		The system must allow the user to perform IPB.		X		
6860	DIS FG/C3I		Level of encryption of message traffic shall be indicated for determining accessibility, interception, exploitation capability.		X		
6865	DIS FG/C3I		The system shall support reporting from reconnaissance, surveillance, and intelligence sources, or any combination of the three.		X		
6870	DIS FG/C3I		The system shall incorporate a real-world delay in processing results of intel collection.		X		
6875	WARSIM		System shall allow for the generation of imagery from both ground truth databases and intelligence reports.		X		

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6880	WARSIM		System shall use the common operational environment (including both weather and terrain) from WARSIM 2000.		X		
6885	WARSIM		System shall be capable of using updated terrain information from WARSIM 2000 as it becomes available.		X		
6890	WARSIM		System shall be capable of using updated weather information from WARSIM 2000 as it becomes available.		X		
6895	WARSIM		The system shall be integrated with the seven battlefield operating systems (BOSSs) (Intelligence, Maneuver, Fire Support, Engineers, Air Defense, Combat Service Support, and Battle C2) provided by WARSIM 2000.		X		
6900	WARSIM		There is a potential that WIM may be expanded to include joint tactical training as a part of the JSIMS effort. While joint training requirements are not currently included in the SRD, they may be pursued at a later date as funding becomes available.			X	
6905	WARSIM		System will comply with HLA.		X		
6910	WARSIM		System will comply with JSIMS effort.		X		
6915	WARSIM		System will comply with C4I TA.		X		
6920	WARSIM		While there is no current requirement for a fully MLS classification system (multiple security levels at once on the same network), WIM may be required to expand and incorporate this functionality in the future as the technology becomes available.			X	
6925	WARSIM		WIM is not required at IOC to pass TS/SCI reports back to the WARSIM 2000 system; only directly to users.		X		
6930	WARSIM		Because the WIM architecture shall be based on the WARSIM 2000 architecture, stand-alone WIM exercises shall be conducted using a scaled-down version of the WARSIM 2000 system.		X		
6935	WARSIM		If in the future of WIM development a Joint Tactical intel simulation is required, analysis functions such as those performed in the JIC and JAC shall be incorporated.			X	JIC: Joint Intelligence Center, JAC: Joint Analysis Center
Comments:							

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Identifier	I noticed that the Lockheed Martin JSIMS Requirements were numbered 2000-5000. Thus, I just started WIM requirements in the 6000-7000 range.						
	You may renumber these to any numbering scheme you want.						
Source	Numbers indicate WIM ORD paragraph number. (You may already know that there is no ORD for WIM; however, there WAS an annex document published by NSC, and it is THAT document I am referring to for traceability.) If the source is NOT a number, it is a requirement taken from the C4ISR Domain						
	in general, and the source is spelled out (WARSIM, USFK, CIO, etc.).						
WARSIM SRD Traceability	Because WIM is a part of WARSIM, I have also included traceability to the WARSIM SRD paragraph number.						
Requirement Text	This is the specific requirement for WIM, broken down to the smallest possible single requirement. These may be combined with other						
	DA requirements as you see fit.						
Test Method	I left this blank, because WIM will be aligned with all WARSIM 2000 testing (FQT, PQT, PPQT, DT&E, OT&E, VV&A, IV&V, etc.)						
	and will not have its own testing.						
IOC/FOC	Self explanatory. Aligned with WARSIM 2000 requirements.						
Remarks	Self explanatory. Mostly acronyms spelled out.						
General Comments	This is a domain list of requirements. That does not mean they will be specifically implemented in WIM or JSIMS as a part of C4ISR.						
	I have only gone to the level of detail necessary to keep this list of requirements unclassified. There are other detailed domain requirements						
	which I cannot list.						